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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/598,984	06/21/2000	Besma Kraiem	450117-02628	6533

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EXAMINER

LY, NGHI H

ART UNIT	PAPER NUMBER
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2686

16

DATE MAILED: 07/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/598,984

**Applicant(s)**

KRAIEM ET AL.

**Examiner**

Nghi H. Ly

**Art Unit**

2686

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 20-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 20-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-12, 18, 20-24, 26-28, 30 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Wellard et al (US 5,862,477).

Regarding claims 1, 18, 20 and 31, Wellard teaches method to create a topology map indicating the quality of connectivity of each network device of a wireless network with all other network devices in the wireless network (see abstract), characterized by the following step: performing a measurement phase in which a calibration signal is successively broadcasted by each network device (see fig.2) and in which all respective other network devices receiving the calibration signal measure the received signal quality (see column 3, lines 14-30) and performing a reporting phase in which the measurement results are transmitted from each network device to the network device creating the topology map, and performing a creating phase in which the topology map of the network is created within the network device creating the topology map on basis of all received measurement results (also see column 3 lines 14-30).

Regarding claims 2 and 21, Wellard further teaches the calibration signal is transmitted in a dedicated control channel (see column 4, lines 52-57).

Regarding claims 3 and 22, Wellard further teaches the measurement results are reported in a respective dedicated control channel (see column 4, lines 52-57).

Regarding claims 4 and 23, Wellard further teaches the calibration signal is transmitted with the maximum allowed transmit power level (see column 6, lines 29-33).

Regarding claims 5 and 24, Wellard further teaches the topology map is updated when a new network device joins the network (see column 8, line 58 to column 9, line 3).

Regarding claims 7 and 26, Wellard further teaches topology map is stored in the central controller of the wireless network (see column 6, lines 11-16 and column 9, lines 58-60).

Regarding claims 8 and 27, Wellard further teaches topology map is broadcasted in the whole network (see fig.2).

Regarding claims 9 and 28, Wellard further teaches only the parts of the topology map related to a specific network device are transmitted to specific network device (see column 5, lines 46-52).

Regarding claim 11, Wellard further teaches the contents of the topology map are codes that are mapped to receive power values (see column 3, lines 25-28).

Regarding claims 12 and 30, Wellard further teaches the measurement phase and/or reporting phase is initiated by the network device creating the topology map (see column 3, lines 14-28).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 6 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wellard et al (US 5,862,477) in view of Pelech et al (US 6,243,585).

Regarding claims 6 and 25, Wellard teaches the method according to claim 1. Wellard does not specifically disclose the topology map is updated after a predetermined amount of time.

Pelech teaches the topology map is updated after a predetermined amount of time (see column 10, lines 10-19).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Pelech to the system of Wellard so that there is little or no interruption in service to the wireless terminals (see column 10, lines 16-19).

6. Claims 10 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wellard et al (US 5,862,477) in view of Jennings,III (US 6,173,191).

Regarding claims 10 and 29, Weelard teaches the method according to claim 1. Wellard does not specifically disclose the calibration signal is transmitted using an omni-directional antenna.

Jennings teaches the calibration signal is transmitted using an omni-directional antenna (see Column 3, lines 65-67 and see column 14, lines 13-16).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Jennings into the system of Wellard in order to transmit the calibration signal in all direction.

7. Claims 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Feng (US 5,374,936) in view of Wellard et al (US 5,862,477).

Regarding claim 13, Feng teaches network device for a wireless network (see fig.2), characterized by means to broadcast a calibration signal (see column 1, line 65 to column 2 line 2), to measure a power level of a received calibration signal (see column

2 lines 18-21), and to wirelessly transmit its measurement results to another network device (see column 2 lines 21-26 and see fig.1, wireless connection between devices).

Feng does not specifically disclose the network characterized by means to internally store results of the measurement.

Wallard teaches the network characterized by means to internally store results of the measurement (see column 6, lines 11-16 and column 9, lines 58-60).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Wellard into the system of Feng in order to prevent data from being lost during power outage.

Regarding claim 14, the combination of Wellard and Feng further teaches characterized in that the functions are performed on demand of another network device or on an internal demand (see Wellard, column 3, lines 14-30).

Regarding claim 15, Feng further teaches characterized by a calibration decoder (see fig.3 box 28 and box 32) that initiates the broadcast of a calibration signal and the measurement of the reception quality of one or more incoming calibration signals upon reception of a measurement control signal (see column 2, lines 18-21).

Regarding claim 16, Feng further teaches characterized in that the calibration decoder (see fig.3 box 28 and box 32) initiates the transmission of one or more measurement results upon reception of a reporting control signal (see column 2, lines 18-21 and see fig.2, multiple arrows or multiple output or input from each device).

Regarding claim 17, Feng further teaches characterized by a report encoder (see fig.3 box 28 and box 32) that receives one or more signal quality indication signals and

encodes therefrom a signal quality control signal to be transmitted to the other network device (see fig.2, multiple arrows or multiple output or input from each device).

### ***Response to Arguments***

8. Applicant's arguments filed 04/29/2004 have been fully considered but they are not persuasive.

On pages 10 and 11 of applicant's remarks, applicant argues that Wellard does not teach wireless transmission of measurement results from each network device create of a topology map.

The examiner, however, disagrees. Wellard does indeed teaches this claimed limitations (see Abstract, "to establish the topology of the system") and (see column 4, lines 39-49, "In pico-cellular wireless systems") and (see column 3, lines 14-25, "measure the receive signal strength") and (see column 4, lines 57-59, "Handoff from one CFP 10 to another, as the CPP 18 moves from one cell to another, is well known in the cellular field"). Therefore, Wellard teaches wireless transmission of measurement results from each network device create of a topology map. In addition, applicant's attention is directed to the rejection of claims 1, 13 and 18 above.

On the same page (page 10) of applicant's remarks, applicant further argues that the Wellard (or Feng) fails to teach storing the results of a power level measurement of received calibration signal internally in a network device that carried out the measurement.



The examiner, however, disagrees. Wellard does in deed teach storing the results of a power level measurement of received calibration signal internally in a network device that carried out the measurement (see column 6, lines 11-16 and column 9, lines 58-60).

On page 11 of applicant's remarks, applicant further argues that neither Pelech nor Jennings can cure the deficiencies of Wellard and Feng with respect to claims 1, 13 and 18.

The examiner, however, disagrees. The combination of Pelech, Jennings, Wellard and Feng does indeed teach applicant's claimed inventions. In addition, applicant's attention is directed to the rejection of claims 1, 13 and 18 above.

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi H. Ly whose telephone number is (703) 605-5164. The examiner can normally be reached on 8:30 am-5:30 pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (703) 305-4379. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nghi H. Ly

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07/01/04

  
CHARLES APPIAH  
PRIMARY EXAMINER